

GenCore version 5.1.9
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OM protein - protein search, using sw model

Run on: October 21, 2006, 15:52:38 ; Search time 40
Seconds

(without alignments)
437.786 Million cell

updates/sec

Title: US-10-789-433-2
Perfect score: 927
Sequence: 1
MGDEEKRNRAITARRQHLKS.....KNIEEKSGMEGRKKMFESSES 182

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to
have a
score greater than or equal to the score of the result being
printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result	Query					
No.	Score	Match	Length	DB	ID	
Description						

1	927	100.0	182	1	TPRBIS	
troponin I, fast s						
2	904	97.5	182	1	TPHUIS	
troponin I, fast s						
3	897	96.8	182	2	A44786	
troponin I, fast s						
4	791	85.3	183	1	TPCHIS	
troponin I, fast s						
5	791	85.3	183	2	A23569	
troponin I, fast s						
6	573.5	61.9	244	2	I51408	cardiac
troponin I						
7	541.5	58.4	184	1	TPRBIW	
troponin I, slow s						
8	532.5	57.4	211	2	A29994	
troponin I, cardia						
9	532	57.4	187	2	B44786	
troponin I, slow s						
10	531	57.3	187	1	TPHUIW	
troponin I, slow s						
11	527.5	56.9	210	1	TPHUIC	
troponin I, cardia						
12	515.5	55.6	211	2	I56441	
troponin I - rat						
13	509.5	55.0	211	2	A53805	
troponin I, cardia						
14	509.5	55.0	211	2	A60124	
troponin I, cardia						
15	508.5	54.9	211	1	TPRBIC	
troponin I, cardia						
16	469.5	50.6	176	2	S70008	
troponin I - Atlan						
17	465.5	50.2	173	2	JC5610	
troponin I - sea s						
18	457	49.3	208	2	A41030	
troponin I, cardia						
19	380	41.0	142	2	JC5612	
troponin I beta -						
20	372	40.1	142	2	JC5611	
troponin I alpha -						
21	310.5	33.7	222	2	I10517	

21	219.5	23.7	208	2	A40547	
troponin I - fruit						
22	218	23.5	260	2	B38594	
troponin I - fruit						
23	210.5	22.7	208	2	A38594	
troponin I - fruit						
24	201.5	21.7	292	2	JE0233	
troponin-I - scall						
25	197	21.3	306	2	T27985	
hypothetical prote						
26	185	20.0	250	2	T22093	
hypothetical prote						
27	179.5	19.4	201	2	A31484	
troponin I, fast s						
28	171.5	18.5	260	2	T25017	
hypothetical prote						
29	165.5	17.9	197	2	T15106	
hypothetical prote						
30	133	14.3	1938	1	A40997	myosin
heavy chain						
31	128	13.8	1265	2	T47626	
structural mainten						
32	119.5	12.9	1300	2	I53799	CG1
protein - huma						
33	119.5	12.9	1356	2	S32763	
kinectin 1 - human						
34	119.5	12.9	2017	1	A36014	myosin
heavy chain						
35	119.5	12.9	2057	2	S61477	myosin
II heavy ch						
36	119.5	12.9	2139	2	T18296	myosin
heavy chain						
37	119	12.8	1938	1	JX0178	myosin
heavy chain						
38	118.5	12.8	587	2	JC1419	Fc
gamma (IgG) rec						
39	118	12.7	24	2	I46513	
troponin I - rabbi						
40	117.5	12.7	848	2	A44972	
paramyosin - nemat						
41	117	12.6	396	2	S13251	
troponin T - fruit						
42	117	12.6	1939	1	A46762	myosin
alpha heavy						
43	116	12.5	387	2	S02708	
troponin T - fruit						

44	115	12.4	465	2	A02986	myosin
alpha heavy						
45	114	12.3	314	2	JC4951	
troponin T - scall						

ALIGNMENTS

RESULT 1

TPRBIS

troponin I, fast skeletal muscle - rabbit

N;Alternate names: TnI

C;Species: *Oryctolagus cuniculus* (domestic rabbit)

C;Date: 24-Apr-1984 #sequence_revision 03-May-1996 #text_change 09-Jul-2004

C;Accession: A45060; A93193; A90286; I46514; A03087

R;Sheng, Z.; Pan, B.S.; Miller, T.E.; Potter, J.D.

J. Biol. Chem. 267, 25407-25413, 1992

A;Title: Isolation, expression, and mutation of a rabbit skeletal muscle cDNA clone for troponin I. The role of the NH2 terminus of fast skeletal muscle troponin I in its biological activity.

A;Reference number: A45060; MUID:93094259; PMID:1339446

A;Accession: A45060

A;Molecule type: mRNA

A;Residues: 1-46,'DS',49-182 <SHE>

A;Cross-references: UNIPROT:P02643; UNIPARC:UPI0000173FD1; GB:L04347

A;Experimental source: skeletal muscle

A;Note: sequence extracted from NCBI backbone (NCBIP:120236) and corrected to correspond with the published sequence

A;Note: the authors translated the codons GGC for residue 56 as Gln, and TAT for residue 80 as Thr

R;Wilkinson, J.M.; Grand, R.J.A.

Nature 271, 31-35, 1978

A;Title: Comparison of amino acid sequence of troponin I from different striated muscles.

A;Reference number: A93193; MUID:78114026; PMID:146828

A;Accession: A93193

A;Molecule type: protein

A;Residues: 2-154,158-182 <WIL>

A;Cross-references: UNIPARC:UPI0000173FD2

R;Wilkinson, J.M.; Grand, R.J.A.

Biochem. J. 149, 493-496, 1975

A;Title: The amino acid sequence of troponin I from rabbit skeletal muscle.

A;Reference number: A90286; MUID:76039510; PMID:1180911
A;Accession: A90286
A;Molecule type: protein
A;Residues: 2-114,'R',115-154,158-182 <WI2>
A;Cross-references: UNIPARC:UPI0000173FD3
R;Moir, A.J.G.; Wilkinson, J.M.; Perry, S.V.
FEBS Lett. 42, 253-256, 1974
A;Title: The phosphorylation sites of troponin I from white skeletal muscle of the rabbit.
A;Reference number: A91408; MUID:74309023; PMID:4369337
A;Contents: annotation; phosphorylation sites
R;Huang, T.S.; Bylund, D.B.; Stull, J.T.; Krebs, E.G.
FEBS Lett. 42, 249-252, 1974
A;Title: The amino acid sequences of the phosphorylated sites in troponin-I from rabbit skeletal muscle.
A;Reference number: A91407; MUID:74308154; PMID:4369265
A;Contents: annotation; phosphorylation sites
R;Putney, S.D.; Herlihy, W.C.; Schimmel, P.
Nature 302, 718-721, 1983
A;Title: A new troponin T and cDNA clones for 13 different muscle proteins, found by shotgun sequencing.
A;Reference number: I46471; MUID:83167564; PMID:6687628
A;Accession: I46514
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 166-178 <PUT>
A;Cross-references: UNIPARC:UPI000016C5C7; EMBL:V00898; NID:g1738; PIDN:CAA24263.1; PID:g929767
C;Complex: troponin is a heterotrimer with one molecule each of troponin C (calcium binding component), troponin I (inhibitory component), and troponin T (tropomyosin-binding component)
C;Function:
A;Description: binds actin and inhibits myosin ATPase activity; with tropomyosin mediates contraction of vertebrate striated muscle in response to calcium
A;Pathway: muscle contraction
C;Superfamily: troponin I
C;Keywords: acetylated amino end; actin binding; muscle contraction; phosphoprotein; skeletal muscle
F;2/Modified site: acetylated amino end (Gly) (in mature form) #status experimental
F;12/Binding site: phosphate (Thr) (covalent) (by cAMP-dependent kinase) #status experimental
F;20,90,118/Binding site: phosphate (Ser) (covalent) (by cAMP-dependent kinase) #status experimental

Query Match 100.0%; Score 927; DB 1; Length 182;
Best Local Similarity 100.0%; Pred. No. 5.4e-56;
Matches 182; Conservative 0; Mismatches 0; Indels
0; Gaps 0;

Qy 1
MGDEEKRNRAITARRQHLKSVMLQIAATELEKEEGRREAQNYLAEHCPPLSLPGSMAE 60

|||||
Db 1
MGDEEKRNRAITARRQHLKSVMLQIAATELEKEEGRREAQNYLAEHCPPLSLPGSMAE 60

Qy 61
VQELCKQLHAKIDAAEEEEKYDMEIKVQKSSKELEDMNQKLFDLRGKFKRPPLRRVRMSAD 120

|||||
Db 61
VQELCKQLHAKIDAAEEEEKYDMEIKVQKSSKELEDMNQKLFDLRGKFKRPPLRRVRMSAD 120

Qy 121
AMLKALLGSKHKVCMDLRANLKQVKKEDTEKERDLRDVGDWKRNIEEKSGMEGRKKMFES 180

|||||
Db 121
AMLKALLGSKHKVCMDLRANLKQVKKEDTEKERDLRDVGDWKRNIEEKSGMEGRKKMFES 180

Qy 181 ES 182

||
Db 181 ES 182

RESULT 2

TPHUIS

troponin I, fast skeletal muscle - human

C;Species: Homo sapiens (man)

C;Date: 13-Jan-1995 #sequence_revision 03-May-1996 #text_change
09-Jul-2004

C;Accession: S43508

R;Zhu, L.; Perez-Alvarado, G.; Wade, R.

Biochim. Biophys. Acta 1217, 338-340, 1994

A;Title: Sequencing of a cDNA encoding the human fast-twitch
skeletal muscle isoform of troponin I.

A;Reference number: S43508; MUID:94198300; PMID:8148383

A;Accession: S43508

A;Molecule type: mRNA

A;Residues: 1-182 <ZHU>

- C

C